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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,981	03/25/2004	Raja Neogi	884.B78US1	7046
21186	7590	06/06/2007		
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402			EXAMINER COUSO, JOSE L	
			ART UNIT	PAPER NUMBER
			2624	
			MAIL DATE	DELIVERY MODE
			06/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/808,981	Applicant(s) NEOGI, RAJA	
	Examiner Jose L. Couso	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-15 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 16-21 is/are rejected.
- 7) ☒ Claim(s) 4-8 and 22-26 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 and 16-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Bolle et al. (U.S. Patent No. 6,597,802).

With regard to claim 1, Bolle et al. describes receiving a video stream comprising a plurality of image frames, each image frame comprising a matrix of pixels (see figure 5 and refer for example to column 5, lines 22-33); selecting a subset of the image frames (see figure 7, element 710 and refer for example to column 6, lines 51-55); for each image frame in the subset determining a sub-fingerprint for the image frame (see figure 7, element 713 and refer for example to column 7, lines 3-4); and assembling the sub-fingerprints into a fingerprint for the video stream (see figure 7, element 720 and figure 8 refer for example to column 7, lines 6-15).

As to claim 2, Bolle et al. describes transmitting the fingerprint to a fingerprint verification system and comparing the fingerprint to a predetermined fingerprint for the video stream (see figure 6 and refer for example to column 6, lines 3-46).

In regard to claim 3, Bolle et al. describes wherein selecting the subset of the image frames includes reading control codes from the video stream, said control codes identifying the subset of the image frames (refer for example to column 7, lines 15-30).

With regard to claim 16, Bolle et al. describes a video server communicably coupled to a communication channel and operable to transmit a video data stream

through the communication channel and a video receiver communicably coupled to the communication channel and operable to receive the video data stream (see figure 6 and refer for example to column 6, lines 3-46); determine a subset of images in the video data stream (see figure 5 and refer for example to column 5, lines 22-33, and see figure 7, element 710 and refer for example to column 6, lines 51-55); calculate a sub-fingerprint for each of the subset of images (see figure 7, element 713 and refer for example to column 7, lines 3-4); assemble the sub-fingerprint for each of the subset of images into a fingerprint (see figure 7, element 720 and figure 8 refer for example to column 7, lines 6-15); and transmit the fingerprint to a fingerprint verification module (see figure 6 and refer for example to column 6, lines 3-46).

As to claim 17, Bolle et al. describes a fingerprint mismatch database operable to store a reference fingerprint for the video data stream and wherein the fingerprint verification module is operable to compare the fingerprint to the reference fingerprint (see figure 6 and refer for example to column 6, lines 3-46).

In regard to claim 18, Bolle et al. describes wherein the fingerprint verification module is located with the video server (as illustrated in figure 6).

With regard to claim 19, Bolle et al. describes a machine-readable medium having machine executable instructions for performing a method (as clearly illustrated in figure 6), the method comprising receiving a video stream comprising a plurality of image frames, each image frame comprising a matrix of pixels (see figure 5 and refer for example to column 5, lines 22-33); selecting a subset of the image frames (see figure 7, element 710 and refer for example to column 6, lines 51-55); for each image

frame in the subset determining a sub-fingerprint for the image frame (see figure 7, element 713 and refer for example to column 7, lines 3-4); and assembling the sub-fingerprints into a fingerprint for the video stream (see figure 7, element 720 and figure 8 refer for example to column 7, lines 6-15).

As to claim 20, Bolle et al. describes transmitting the fingerprint to a fingerprint verification system and comparing the fingerprint to a predetermined fingerprint for the video stream (see figure 6 and refer for example to column 6, lines 3-46).

In regard to claim 21, Bolle et al. describes wherein selecting the subset of the image frames includes reading control codes from the video stream, said control codes identifying the subset of the image frames (refer for example to column 7, lines 15-30).

3. Claims 9-15 are allowed.

4. Claims 4-8 and 22-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is an examiner's statement of reasons for allowance: The prior art of the record fail to teach or suggest singly and/or in combination A method and device for receiving a video stream comprising a plurality of image frames, each image frame comprising a matrix of pixels, selecting a subset of the image frames, for each image frame in the subset determining a sub-fingerprint for the image frame, and assembling

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the sub-fingerprints into a fingerprint for the video stream wherein determining a sub-fingerprint for the image frame comprises computing a discrete cosine transformation (DCT) block for a pixel block surrounding a pixel, said DCT block having coefficients, computing an estimation of a variance of the coefficients, setting a variance value in a variance matrix with the estimation of the variance, wherein the value is set at a position in the variance matrix corresponding to the pixel position in the image frame matrix, determining a minimum variance value in a signature window of the variance matrix enclosing the pixel position, and setting a first predetermined value representing the minimum variance in a constellation matrix at a position corresponding to the minimum variance value and setting all other positions in the signature window to a different predetermined value as prescribed for in the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Uchida, Russo, Du et al. ('116) and ('658) all disclose systems similar to applicant's claimed invention.

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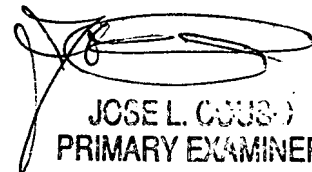
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jose L. Couso whose telephone number is (571) 272-7388. The examiner can normally be reached on Monday through Friday from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the USPTO contact Center whose telephone number is (703) 308-4357.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jlc
May 31, 2007


JOSE L. COUSO
PRIMARY EXAMINER